Developing and introducing patient-oriented quality indicators for Swedish community pharmacy practice
– a Government Commission
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Sweden

in 1658…
Sweden

- Constitutional monarchy
- Parliamentary democracy
- 9.7 million inhabitants
- 3rd largest country in the EU

King Carl XVI Gustaf
The opinions or assertions in this presentation are my own views and are not to be construed as official or as necessarily reflecting the views of the Swedish Medical Products Agency, where I am employed.
Swedish Community Pharmacy Practice - a monopoly system 1971-2009

- 910 community pharmacies (10 000 inhabitants/pharmacy)
- 74 hospital pharmacies, most including outpatient services
- 36 ”OTC-shops”
- 4 production centers
- 11 000 employees
Swedish Community Pharmacy Practice
- a re-regulated competitive market after 2009-10

• Ownership allowed for anybody except pharmaceutical industry and prescribers
• Total freedom of establishment
• A pharmacist-in-charge per pharmacy required
• Apoteket AB had to sell 2/3 of their pharmacies
• 1 355 pharmacies (7 500 inhabitants per pharmacy)
• Most pharmacies owned by 6 pharmacy chains
• Many OTCs available in non-pharmacy outlets, such as grocery stores and petrol/gas stations
Quality indicators

- Items that are defined and measurable
- Aimed at assessing, comparing, and improving
- The quality of different structures, processes, and outcomes


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The Donabedian Model as a framework

- A conceptual model that provides a framework for examining health services and evaluating quality of care

  - **Structure:** the context in which care is delivered
  
  - **Process:** the transactions between patients and providers
  
  - **Outcomes:** the effects of healthcare on the health status of patients and populations

Quality indicators, an example

- Structure indicator: *Does the pharmacy have written guidelines on patient counseling?* => yes/no

- Process indicator: *Proportion of the pharmacy’s patient encounters, where the pharmacy practitioners comply with the written guidelines* => X%

- Outcome indicator: *Proportion of patients satisfied with the counseling given, according to the written guidelines* => Y%

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Publications on community pharmacy quality indicators

• ~ 20 publications

• Indicators primarily developed by pharmacy organizations and university researchers

• The Netherlands, UK, Finland, Portugal, Bulgaria, USA, Canada, Brazil, Argentina and Taiwan

• Most indicator use limited in geography, scope or time

• Indicators context-dependent

• Some indicator sets validated by Delphi-technique or other consensus methodology

Methods for measuring health care quality and how these methods can be applied to the measurement of pharmacy quality described. A Pharmacy Quality Alliance (PQA) created to coordinate efforts of numerous pharmacy stakeholders in developing measures of pharmacy quality.


A report of PQA demonstration projects in community pharmacies in five states in the USA. Considerable variation in pharmacy performance scores. Use of website to report scores feasible.

A set of 20 consensus-based indicators for the safe use of medication for both in-patient and out-patient settings developed by a panel of national experts through a Delphi survey process via e-mail.

18 process indicators and 2 outcome indicators, such as:

- Number of prescriptions/medication orders with “take as directed” as the only instruction for use as a percentage of all prescriptions/medication orders (*process indicator*)

- Number of ADE-related hospitalizations as a percentage of all hospitalizations (*outcome indicator*)

A set of 42 indicators were
- developed by the Dutch Healthcare Inspectorate and the Royal Dutch Pharmacists Association (KNMP)
- validated by pharmacy practice experts and practicing pharmacists
- field tested by a random sample of 30 community pharmacists
- composed of 13 structure indicators, 18 process indicators and 11 outcome indicators

The set contained indicators on patient counseling (6), clinical risk management (10), compounding (7), dispensing (3), monitoring of medication use (11) and quality management (5).

Aimed to assess the validity of the current set of 52 community pharmacy quality indicators, using the Indicator Assessment Framework (IAF).

IAF criteria: content validity, absence of selection and measurement bias, statistical reliability.

An expert panel applied the IAF criteria to the set of indicators collected in 1,807 Dutch community pharmacies on their performance.

25% of indicators judged as meeting the requirements for all criteria.
Examples:

• Number of pharmaceutical care interventions delivered per standardised denominator, such as 1000 prescriptions dispensed or 1000 patients.

• Number of patients counselled about their medicines per standardised denominator, such as 1000 prescriptions dispensed or 1000 patients.

• Number of adverse drug event reports (to include both adverse drug reactions and medication errors) per year.
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- Medical Products Agency (MPA) in collaboration with
  - the National Board of Health and Welfare
  - the Swedish Association of Local Authorities and Regions
  - the Swedish Pharmacy Association
  along with consultation with other appropriate stakeholders

- to develop national indicators for
  - patient safety
  - accessibility
  - quality
  in community pharmacy practice

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• public tool for comparing different pharmacies
• inspired by the Swedish version of the FIP/WHO Good Pharmacy Practice (GPP)
• a platform for implementation, including
  - collection
  - publication
  - follow-up
of quality indicator data

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Indicators abroad according to publications and study visits and suggestions from collaboration and consultation groups

450 indicators
Indicators abroad according to publications and study visits, and suggestions from collaboration and consultation groups

- 450 indicators

Elimination of foreign, context-dependent indicators, duplicates and indicators difficult to measure

- 200 indicators
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Categorization, translations, prioritization and adjustments to Swedish conditions

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Elimination of indicators not fulfilling the requirements of the National Board of Health and Welfare

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Elimination of indicators not fulfilling the requirements of the National Board of Health and Welfare

Evaluation by the NBHW, SALAR and SPA

MPA evaluation and prioritization

450 indicators

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21 indicators
Final evaluation by collaboration and consultation groups and final selection by the MPA
Final evaluation by collaboration and consultation groups and final selection by the MPA

21 indicators

5 (+2) indicators, reported to the Ministry of Health and Social Affairs
Final set of quality indicators

• Does the pharmacy have a system, accessible through the pharmacy’s website or by phone, through which the patient can pre-order prescribed medicines and get feedback from the pharmacy, enabling the patient to receive the medicines upon arrival to the pharmacy?

• Does the pharmacy have written instructions on counseling on the use of over-the-counter medicines (OTCs) in humans and animals?

• Does the pharmacy enable individual counseling in a private, wheelchair-accessible place on prescribed medicines and OTCs, where the counseling neither is visible nor audible to other patients or pharmacy staff?
Final set of quality indicators, cont.

• Does the pharmacy offer pre-booked counseling on medicines and their use?

• Does the pharmacy have written work procedures for the pharmacy staff’s deviation management and learning from negative events?
Two development quality indicators

• Two additional quality indicators in the pipeline:
• Proportion of patients, whose prescriptions are controlled with regard to prescribed dosage, interactions, drug duplications, contraindications and inappropriate drugs for children and the elderly respectively by help of an electronic decision support system

• Average number of continuous professional development hours on the use of prescription medicines and OTCs for humans or animals during the past year in pharmacy staff working with dispensing prescriptions and serving OTC customers, respectively

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Quality indicator operationalization to enable data collection

- Development of a web questionnaire of 12 questions, as more than one question was usually needed to cover all aspects of a single indicator;

Does the pharmacy enable individual counseling in a private, wheelchair-accessible place on prescribed medicines and OTCs, where the counseling neither is visible nor audible to other patients or pharmacy staff?

- Is there in your pharmacy a wheelchair-accessible place, aimed at individual counseling on prescribed medicines and OTCs?

- Is there in your pharmacy a place, aimed at individual counseling on prescribed medicines and OTCs, not visible to other patients?

- Is there in your pharmacy a place, aimed at individual counseling on prescribed medicines and OTCs, not visible to other pharmacy staff?

- Is there in your pharmacy a place, aimed at individual counseling on prescribed medicines and OTCs, not audible in other parts of the pharmacy?
Quality indicator data collection

- Web questionnaire by the Medical Products Agency to all pharmacies in Sweden
- December 2014 – January 2015
- Response rate 81%
- Large variation in both response rates and fulfilled quality indicators among different pharmacy chains
Indicator 1

Does the pharmacy have a system, accessible through the pharmacy’s website or by phone, through which the patient can pre-order prescribed medicines and get feedback from the pharmacy, enabling the patient to receive the medicines upon arrival to the pharmacy?

1. Can a patient pre-order prescribed medicines through the web, to be received at your pharmacy?

Ja = Yes, Nej = No
2. Can a patient pre-order prescribed medicines by phone, to be received at your pharmacy?

Ja - 99%
Nej - 1%
3. Will you let a patient, who has pre-ordered prescribed medicines from your pharmacy, know when the medicines can be picked up?

Indicator 1

- Ja: 99%
- Nej: 1%
Indicator 2

Does the pharmacy have written instructions on counseling on the use of over-the-counter medicines (OTCs) in humans and animals?

4. Does the pharmacy have written instructions to be followed by pharmacy staff, when counseling on the use of over-the-counter medicines (OTCs) in humans?
5. Does the pharmacy have written instructions to be followed by pharmacy staff, when counseling on the use of over-the-counter medicines (OTCs) in animals?
Indicator 3

Does the pharmacy enable individual counseling in a private, wheelchair-accessible place on prescribed medicines and OTCs, where the counseling neither is visible nor audible to other patients or pharmacy staff?

6. Is there in your pharmacy a *wheelchair-accessible* place, aimed at individual counseling on prescribed medicines and OTCs?

![Bar chart showing 70% 'Ja' (Yes) and 30% 'Nej' (No) results.](image-url)
7. Is there in your pharmacy a place, aimed at individual counseling on prescribed medicines and OTCs, *not visible to other patients*?
8. Is there in your pharmacy a place, aimed at individual counseling on prescribed medicines and OTCs, *not visible to other pharmacy staff*?
9. Is there in your pharmacy a place, aimed at individual counseling on prescribed medicines and OTCs, not audible in other parts of the pharmacy?
Indicator 4

Does the pharmacy offer pre-booked counseling on medicines and their use?

10. Does the pharmacy offer pre-booked counseling on medicines and their use?

<table>
<thead>
<tr>
<th></th>
<th>Ja</th>
<th>Nej</th>
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<tbody>
<tr>
<td></td>
<td>68%</td>
<td>32%</td>
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</table>
Indicator 5

Does the pharmacy have written work procedures for the pharmacy staff’s deviation management and learning from negative events?

11. Does the pharmacy have written work procedures for the pharmacy staff’s deviation management?
12. Does the pharmacy have written work procedures for the pharmacy staff’s learning from negative events (incidents, patient complaints and dispensing errors)?
Proposed publications of indicator data

• Each pharmacy’s results voluntarily posted in the pharmacy, well visible to customers/patients

• Published voluntarily on the respective pharmacy chain’s website

• National publication on the website of an independent organization, responsible for indicator data collection

• Search functions for pharmacy selection
  - in customers’/patients’ immediate area
  - within a certain distance
  - pharmacies in a specific location/town

• Flexible publication to enable inclusion of future process and outcome indicators
Conclusions 1(2)

• Collaboration and consultation with appropriate stakeholders throughout the process of big importance

• A small set of quality indicators a good starting point

• Operationalization of indicators into questions feasible

• Indicator data collection through a web questionnaire convenient

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Conclusions 2(2)

• Voluntary pharmacy publication of indicator data proposed

• Publication on independent organization’s web site with appropriate search functions advisable

• A continuous future development into process and outcome indicators crucial
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Thank you for your attention!

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